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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/781,545	02/13/2001	Akira Ishida	P101201-00014	2277

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EXAMINER

HARRY, ANDREW T

ART UNIT PAPER NUMBER

2686

DATE MAILED: 09/08/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

2/9

Office Action Summary

Application No.

09/781,545

Applicant(s)

ISHIDA, AKIRA

Examiner

Andrew T Harry

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.

- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7 is/are rejected.
- 7) ☒ Claim(s) 5 and 6 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Dam et al.*, U.S. Patent 6,385,457 ("*Dam*"), and further in view of well known prior art in the field of the invention.

As pertaining to **claims 1 and 7**, *Dam* teaches a wireless base station that wirelessly communicates with a plurality of mobile stations (see *Dam*, col. 4, lines 7-16) using what *Dam* describes as what could be a variety of different signaling techniques (GSM, TDMA, etc.), each mobile station sending communication data containing an identifier to the wireless base station (see *Dam*, col. 6, line 66-col. 7, line 28), comprising:

association information storing means for storing association information that associates each of the plurality of mobile stations with a different ID (see *Dam*, col. 7, lines 28-60);

receiving means for receiving data into which communication data sent from the plurality of mobile stations is multiplexed by the protocol in use (see *Dam*, col. 4, lines 7-15);

sending means for sending communication data containing the received ID to the wireless base station (see *Dam*, col. 7, line 61-col. 8, line 4) and

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extracting means for specifying an ID associated with each mobile station by referring to the association information, and (b) extracting, from the received data, communication data sent from the mobile station by using the specified ID. See *Dam*, col. 7, lines 9-60.

Dam does not explicitly state that space division multiplexing (SDM) is the method used for communication between the base station and the mobile terminal. However, *Dam* does teach that TDMA frames and methods are used for the transmission of data between the terminal and the base station, but explains that it could be used in others. See *Dam*, col. 14 lines 54-67. The Examiner takes official notice that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify *Dam*'s method so that it could be used in various communications systems, including SDM. This would have allowed *Dam*'s method and apparatus for antenna forming and beam directing to be used for systems other than TDMA systems.

As pertaining to **claim 2**, in *Dam*'s base station,
the association information includes a plurality of IDs and state information that shows the plurality of mobile stations as being associated with the plurality of IDs (see *Dam*, col. 10 lines 49-55);

wherein the wireless base station further comprises:

request receiving means for receiving a request for assignment of a channel from a mobile station out of the plurality of mobile stations (see *Dam*, col. 7, line 45-col. 8, line 19); and

assigning means for (a) specifying an ID for the requesting mobile station when the request has been received, wherein the specified ID differs from an ID associated with another mobile station, with which the wireless base station currently communicates (see *Dam*, col. 7,

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lines 21-60), (b) updating the state information by associating the specified ID with the requesting mobile station (see *Dam*, col. 7, lines 21-60), and (c) sending information to the requesting mobile station, wherein the sent information shows the specified ID and a channel assigned to the mobile station. See *Dam*, col. 7, line 61-col. 8, line 4.

As pertaining to **claim 3**, *Dam*'s method and apparatus further comprises:

association deleting means for deleting, when a communication with a mobile station is completed, and association between the mobile station and an associated ID from the association information. See *Dam*, col. 9 lines 6-19.

As pertaining to **claim 4**, *Dam*'s method and apparatus further comprises:

ID receiving means for receiving an ID from a mobile station out of the plurality of mobile stations (see *Dam*, col. 7, lines 21-60); and

updating means for updating the association information by associating the received ID with the mobile station that sent the ID when the ID has been received (see *Dam*, col. 7, lines 21-60).

Allowable Subject Matter

Claims 5 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

B. Tamil et al., U.S. Patent 6,169,910 teaches a focused narrow beam communication system.

C. Thibault et al., U.S. Patent 6,240,098 teaches a method and device for space division multiplexing of radio signals transmitted in cellular radio communications.

D. Shoki et al., U.S. Patent 6,087,986 teaches an adaptive array antenna used in multi-carrier wave radio communications.

E. Kohno et al., U.S. Patent 6,522,898 teaches a radio communication system.

F. Smith et al., U.S. Patent 6,009,124 teaches a high data rate communications network employing an adaptive sectorized antenna.

G. Kuwahara et al., U.S. Patent 6,141,335 teaches a radio communication system.

H. Crichton et al., U.S. patent 6,330,459 teaches a communication system with a beamformed control channel and method of system control.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T Harry whose telephone number is 703-305-4749. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on 703-305-4379. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

ATH



Marsha D Banks-Harold
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